

on the Lower Lakes. Maximum velocities on the 22nd:—Oswego and Rochester, 5:15 p. m., NE., 32 and 30; Cleveland, 5:15 p. m., NW., 42; Sandusky, 6:45 p. m., NW., 42; and, on the 23rd, at Erie, 10:15 a. m., NW., 34, lake very rough.

No. XI—was probably northeast of British Columbia at midnight of the 21st, extending southwestward over Oregon, where the pressure was 0.30 below normal, followed, on the morning of the 22nd, by rising pressure, westerly winds and light rains. 22nd, moved southeastward to the Missouri valley, preceded by southeast winds in the Northwest. 23rd, moved down the Missouri valley, unattended by precipitation, except light snow in rear of the centre as the winds changed to colder northerly; during the day the lowest pressures of the month occurred over the Southwest and thence to Colorado and New Mexico, in which region a secondary centre of depression formed, which will be considered as area No. XII. 24th, the present area moved eastward over the central Mississippi and Ohio valleys, followed by northerly winds and light rains. 25th, moved from the Lower Lake region over New England, with light, but increasing, precipitation. 26th, passed south of Nova Scotia, and heavy rain prevailed for a short time at Halifax and Sydney.

No. XII.—Formed during the 23rd over the high lands in northwestern Texas and New Mexico, where high temperature prevailed during the afternoon. 24th, moved southeastward over Texas, followed by cold northerly winds, with snow in New Mexico and rain in western Texas. 25th, was off the coast of Texas and Louisiana, followed by brisk to high northerly winds, rain or snow in former, and preceded by easterly winds and heavy rain at New Orleans. 26th, moved northward, with southerly winds and heavy rains on the East Gulf coast, and generally rainy weather thence to Tennessee and Virginia. 27th, moved northward to the Lower Lakes, with heavy rains, thence to the Atlantic coast, and heavy snows from Arkansas to Michigan. 28th, passed down the St. Lawrence valley, with heavy rains, thence to the coast of New England and Nova Scotia. Cautionary Signals ordered up at Indianola and Galveston were justified on the 25th: Indianola, 10 a. m., N. 43, and Galveston, 7:45 p. m., NW. 32; on the Atlantic coast from Smithville to Sandy Hook on the 26th, (changed to Cautionary Off-shore on the 27th;) from New York to Eastport on the 27th, (changed to Cautionary Off-shore on the 28th;) and in the Lake region on the afternoon of the 27th were justified except at the stations in northern Michigan. Maximum velocities: on the 27th, at Wilmington, 1:45 p. m., SW. 31; Cape Hatteras, 4:00 p. m., S. 40; Kittyhawk, 4:35 p. m., S. and SW. 44; Barnegat, 8:40 p. m., SE. 40; Sandy Hook, 5:35 p. m., E. 47; New London, 10:20 p. m., SE. 45; Thatcher's Island, 11:00 p. m., SE. 34; Duluth, 11:00 p. m., NW. 34. On the 28th, Cape Lookout, 4:30 a. m., W. 40; Cape May, 3:45 p. m., W. 46; Newport, 10:40 p. m., NW. 32; Wood's Holl, 2:05 a. m., SE. 34; Thatcher's Island, 1:00 a. m., NW. 35; Eastport, 8:25 a. m., SE. 38; Erie, 6:30 a. m., W. 32; Cleveland, 4:10 a. m., NW. 36; Sandusky, 2:35 a. m., W. 37.

No. XIII—was probably north of Montana on the 25th, and passed eastward, over Manitoba, on the 26th, followed by high north winds and light snows in Dakota and Minnesota.

No. XIV.—During the 28th the pressure fell below the normal over the Western Plateau, and on the 29th in New Mexico, while high-pressure area No. IX was over Montana; light snows fell during these days from Idaho to Colorado and New Mexico; five inches of snow was reported at Summit, Rio Grande county, Colorado. During latter part of the 29th the lowest pressure was central over the high lands of western Texas. 30th, moved eastward to Arkansas, preceded by a heavy NE. snow-storm in the Lower Missouri valley, and followed by brisk to high northerly winds in Texas. Cautionary Off-shore Signals were ordered at Indianola and Galveston. Maximum velocity at Indianola, NW. 32. This area afterwards developed into quite a severe storm, and will be considered in the December REVIEW.

INTERNATIONAL METEOROLOGY.

On chart No. IV are shown the partial tracks of hurricanes occurring over the Oceans as follows: *Atlantic*.—No. I. as given in the September REVIEW; No. II, September 14th to 17th; No. III, September 24th to October 3rd, and No. IV, September 29th to October 8th, that were treated of in the October REVIEW as one storm, but Mr. Jahncke, of St. Thomas, considered them as two, whose paths crossed each other. No. V, October 9th to 20th, probably reached the British Isles. No. VI, October 14th to 19th, the track of which is nearly identical with that of No. V, but about five days later. No. VII, October 21st to 29rd, was treated of in the October REVIEW. *Pacific*.—No. I, September 12th; No. II, September 15th to 19th; No. III, September 19th; No. IV, October 7th to 9th; No. VI, October 17th to 19th. Additional reports of storms are to hand. *South Atlantic Ocean*.—September 8th, 31° 19' S., 31° 00' E.; September 25th to October 1, storm lasting six days off the coast of Brazil; October 3rd, heavy at Caracac, Venezuela.

TEMPERATURE OF THE AIR.

The isothermal lines on chart No. II illustrate the general distribution of the temperature of the air for the month. The mean temperature for Punta Rasa should be 69°.6 instead of 74°, as given on the chart. By reference to the table on the left-side of the chart, it will be seen that the temperature has been considerably above the normal over the interior of the continent, the largest deviation from the normal (+13°.7) occurring in the Upper Missouri valley. Along the Pacific, Gulf and South Atlantic coasts it has ranged about, or slightly above, normal, and in the Middle States and New England about 3° above.

Minimum and Maximum Temperatures, respectively.—*Maine*—Mechanics' Falls, 15°, and 50°; Portland, 22°, 56°; Eastport, 17°, 54. *New Hampshire*—Dunbarton, 13°, 52°; Mt. Washington, —10°, 37°. *Vermont*